

**CONSTRUCTION MONITORING  
PROCEDURES  
AND  
CHECKLIST**

**TOWN OF NEWTON, NH**

**April 2007**

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## **INTRODUCTION**

The purpose of this booklet is to briefly discuss procedures for observing construction of subdivision streets and related activities being performed in the TOWN of Newton. The procedures are based upon the TOWN of Newton Zoning Ordinance, subdivision regulations, site plan regulations and other pertinent regulations.

The TOWN of Newton has retained an ENGINEERING consultant to assist the TOWN in this area. This booklet briefly outlines the relationships between the DEVELOPER, his contractor, his ENGINEER, and the TOWN of Newton and their ENGINEER.

After this booklet has been reviewed and a preconstruction meeting by the above parties, it will be signed by all parties and copies distributed to each part.

## **PRECONSTRUCTION MEETING**

The TOWN'S consultant, hereinafter defined as the TOWN'S ENGINEER, will attend a preconstruction/post approval meeting with representatives of the TOWN, the DEVELOPER, the DEVELOPER'S CONTRACTOR, the DEVELOPER'S ENGINEER, and affected utility companies that are involved. The intent of the preconstruction meeting is as follows:

1. The TOWN is to contact the TOWN'S ENGINEER once a signed plan with final approval is obtained. The TOWN will have one signed copy of the approved plan delivered to the TOWN ENGINEER to be used for construction inspection.

2. The DEVELOPER, the DEVELOPER'S ENGINEER, and the DEVELOPER'S CONTRACTOR will coordinate a preconstruction/post approval meeting with the TOWN ENGINEER and the TOWN.
3. The TOWN'S representative is to outline the respective responsibilities of the TOWN'S ENGINEER, the MUNICIPALITY, and the DEVELOPER.
4. The DEVELOPER'S representative is to present the construction schedule and sequence, its coordination with affected State and TOWN agencies who may have jurisdiction with the project and governing utilities companies, and introduce the Contractor's Superintendent for the project.
5. The TOWN shall provide two copies of the approved plans, specifications and related documents to the TOWN ENGINEER.
6. The TOWN'S representative shall establish the chain of communication between all parties involved.
7. Emergency telephone numbers to be supplied, and TOWN ENGINEER will consolidate and publish.
8. The DEVELOPER shall provide his tax identification to the TOWN.

## **PROFESSIONAL SERVICES – NOTIFICATION AND FEES**

1. The TOWN'S ENGINEER shall be notified by the DEVELOPER or his representative at least two (2) working days prior to construction initiation and any subsequent times the TOWN ENGINEER'S services will be required.

2. The DEVELOPER or his representative shall inform the TOWN'S ENGINEER of his immediate work schedule.
3. The DEVELOPER will be charged hourly for the TOWN ENGINEER'S services.
4. Cancellation of the TOWN ENGINEER'S services must be received at least one day prior to his scheduled appearance.

In cases where the TOWN'S ENGINEER is not notified in advance that his services are not required, a minimum charge of four (4) hours shall be assessed to the requesting DEVELOPER.

## **ACCESS TO WORK**

The DEVELOPER shall provide the TOWN of Newton and its TOWN'S ENGINEER a safe and full access to all the construction operations at any requested time.

Structural calculations (by a Registered Engineer in the State of New Hampshire) may be required by the TOWN as evidence of adequacy of proposed excavation supports. Cost shall be borne by DEVELOPER.

## **OBSERVATION OF WORK**

The TOWN'S ENGINEER will monitor the progress of the construction of the project and observe the work relative to the approved plans, specifications, and related documents. The TOWN'S ENGINEER will prepare construction reports, discussing his

observations and submit these to the TOWN weekly. Observation of the work is not partial or final acceptance of the project. Additionally, an estimated inspection cost report containing hours of inspection, out-of-pocket expenses, etc. will be provided to both the TOWN and the DEVELOPER.

The TOWN'S ENGINEER shall verify that all items to be used in conjunction with the construction activities comply with shop drawings, mill test reports, sketches and related documents approved by the DEVELOPER'S ENGINEER. All such documents shall be submitted by the DEVELOPER or his representative by the DEVELOPER'S ENGINEER as required by the TOWN of Newton.

Upon apparent completion of construction, the TOWN'S ENGINEER will prepare a punch list of items requiring correction, conduct a final inspection of the work, and prepare a final report to the TOWN of Newton regarding the project.

## **FIELD CHANGES**

Minor changes which do not alter the design intent may be suggested by the DEVELOPER and agreed to by the TOWN'S ENGINEER. However, changes which alter the basic design, as judged by the TOWN'S ENGINEER, must be resubmitted to the TOWN Planning Board through the design ENGINEER for approval prior to construction.

## **TESTING**

When requested by the TOWN'S ENGINEER, the DEVELOPER, at his own expense, shall provide any and all proof of compliance with the TOWN requirements and specifications.

Acceptable proof shall be by, but not limited to, approved independent laboratory tests, approved independent field tests, shop drawings and Certificates of Compliance from manufacturers. All tests as required by regulations and specifications shall be performed at the DEVELOPER'S expense.

## **LAYOUT OF THE WORK**

1. It is the DEVELOPER'S responsibility to provide layout of the work. The layout of the work shall be done by an ENGINEER or Land Surveyor registered in the State of New Hampshire. Line, grade, and location of roadway, drainage, sewer and utilities shall be provided with staked offsets. Layout shall be maintained during the course of the work and shall be provided as required to adequately control the accuracy of the work. Supplemental layout shall be provided as required by the TOWN'S ENGINEER.
2. A qualified superintendent shall be named, assigned and be present during the course of the construction.

## **CONSTRUCTION CHECKLIST ITEMS**

A Construction Checklist indicating the various construction items discussed herein, and their estimated value as previously mutually agreed upon by the TOWN and the DEVELOPER is attached. It is the intent to use this form as a tool to monitor construction progress.

### **1. CLEARING AND GRUBBING**

- a. The work as completed shall be observed by the TOWN'S ENGINEER prior to the start of further construction.

### **2. SUBGRADE CONSTRUCTION**

- a. Fill operation shall be under observation by the TOWN'S ENGINEER.  
Under no circumstances will fill operations be allowed until existing ground has been checked for grubbing, stripping topsoil, and removal of unsuitable material.
- b. All excavation subgrades shall be checked by the TOWN'S ENGINEER for material, compaction, and grade before the gravel subbase is placed.

### **3. UTILITY INSTALLATION**

- a. Drainage System
  - 1) Drainage construction shall be performed under the TOWN ENGINEER'S periodic observation. No work shall be permanently backfilled without prior permission by the TOWN'S ENGINEER.



- 2) Before final acceptance, completed storm drains will be checked.

Any imperfections such as cracks, displaced joints, objectionable variations from line of grade or leaks, shall be repaired or replaced to the satisfaction of the TOWN ENGINEER.

b. Sewer system

- 1) Sanitary sewer shall be performed under the TOWN ENGINEER'S periodic observation. No work shall be permanently backfilled without prior permission by the TOWN'S ENGINEER. Before final acceptance, completed sanitary sewers will be checked. Any imperfections such as cracks, displaced joints, objectionable variations from line of grade or leaks, shall be repaired or replaced to the satisfaction of the TOWN ENGINEER.
- 2) Leakage and man-drill tests for sewer pipes and manholes shall be observed by the TOWN'S ENGINEER.
- 3) The DEVELOPER shall provide the TOWN access to all sewers for the purpose of performing a television inspection of the sewer.

c. Water System

- 1) Water pipe installation shall be performed under the TOWN ENGINEER'S periodic observation. No work shall be permanently backfilled without prior permission by the TOWN'S ENGINEER.

- 2) Leakage tests for water pipes shall be observed by the TOWN'S ENGINEER.

d. Other Utilities

- 1) In general, all the work shall conform to the requirements and specifications of the proper utility. It is the DEVELOPER'S responsibility to arrange the work with the proper utility authority and the TOWN.
- 2) Trenching and backfilling operation shall be observed by the TOWN'S ENGINEER.

**4. SUBGRADE PREPARATION**

- a. The subgrade shall be checked by the TOWN'S ENGINEER for compaction and conformance to line, grade, and crown. Under no circumstances will gravel operation be allowed until the subgrade has been checked by the TOWN'S ENGINEER.

**5. GRAVEL BASE PLACEMENT**

- a. The gravelling operation shall be under the TOWN ENGINEER'S observation. After the gravel subbase is completely placed, shaped and compacted, the surface shall be checked for smoothness, accuracy of crown and grade, and compaction. Compaction tests will be at the expense of the DEVELOPER.
- b. Sieve analysis of the proposed material shall be provided by the DEVELOPER as required by the TOWN'S ENGINEER prior to starting the operation.

## **6. CRUSHED GRAVEL BASE PLACEMENT**

- a. The crushed gravel operation shall be under the TOWN ENGINEER'S observation. After the crushed gravel course is completed, shaped and compacted. The surface shall be checked for smoothness, accuracy of crown and grade, and for compaction.
- b. Sieve analysis of the provided material shall be provided by the DEVELOPER prior to starting the operation.
- c. All sieve and compaction tests shall be paid for by the DEVELOPER.

## **7. PLACEMENT OF BITUMINOUS CONCRETE**

### **a. Base Course**

- 1) No pavement is to be placed until the crushed gravel base has been checked by the TOWN'S ENGINEER. Pavement operation shall be under the TOWN ENGINEER'S observation.
- 2) Pavement placement shall be checked for conformance to method, crown, line, grade, compaction, smoothness and uniformity.

### **b. Wearing Course**

- 1) No pavement is to be placed until the base course has been checked by the TOWN'S ENGINEER. Pavement operation shall be under the TOWN ENGINEER'S observation.
- 2) Pavement placement shall be checked for conformance to method, crown, line, grade, compaction, smoothness and uniformity.

- 3) No permanent wearing course pavement shall be placed after November 15.

## **8. CURBING INSTALLATION**

- a. The DEVELOPER is not required to have the TOWN'S ENGINEER present during construction or installation of curbing; however, if the curb is considered unacceptable by the TOWNs ENGINEER, it is the responsibility of the DEVELOPER to make any required changes.

## **9. SIDEWALK CONSTRUCTION**

- a. The gravelling operation shall be performed under the TOWN ENGINEER'S observation. After the gravel subbase is completely placed, shaped and compacted, the surface shall be checked for smoothness, accuracy of crown and grade, and compaction. Compaction tests will be at the expense of the DEVELOPER.  
  
Sieve analysis of the proposed material shall be provided by the DEVELOPER as required by the TOWN'S ENGINEER prior to starting the operation.
- b. The crushed gravel operation shall be performed under the TOWN ENGINEER'S observation. After the crushed gravel course is completed, shaped and compacted, the surface shall be checked for smoothness, accuracy of crown and grade, and compaction.  
  
Sieve analysis of the provided material shall be provided by the DEVELOPER prior to starting the operation.
- c. All sieve and compaction tests shall be paid by the DEVELOPER.

- d. No pavement is to be placed until the crushed gravel base has been checked by the TOWN'S ENGINEER. Pavement operation shall be performed under the TOWN ENGINEER'S observation.  
  
Pavement placement shall be checked for conformance to method, crown, line, grade, compaction, smoothness and uniformity.
- e. No permanent wearing course pavement shall be placed after November 15.

## **10. PLACEMENT OF LOAM AND SEED**

- a. Loamed areas shall be checked for material, smoothness, and conformance to shape and grade.
- b. Seed will be checked for conformance to TOWN subdivision regulations and related regulations.

## **11. PLACEMENT OF ROAD BOUNDS**

- a. Bounds shall be checked for proper location and conformance to shape and material.

The parties below reviewed this document at a preconstruction meeting held on

\_\_\_\_\_ relating to the construction of \_\_\_\_\_.

\_\_\_\_\_  
TOWN OF NEWTON

\_\_\_\_\_  
DATE

\_\_\_\_\_  
DEVELOPER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
DEVELOPER'S CONTRACTOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TOWN ENGINEER

\_\_\_\_\_  
DATE

## **APPENDIX**

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# CONSTRUCTION CHECKLIST

## TOWN OF NEWTON, NEW HAMPSHIRE

Name of Subdivision:			Contractor:	
Name of Developer:			Location:	
Inspection Subject	Engineering Estimate	Date of Completion	Town Engineer Representative	Comments
1. Clearing and Grubbing				
2. Subgrade Compaction				
3. Utility Installation				
3.1 Drainage System				
3.2 Sewer System				
3.3 Water System				
3.4 Other Utilities				
4. Subgrade Preparation				
5. Gravel Base Placement				
6. Crushed Gravel Base Placement				
7. Placement of Bituminous Concrete				
7.1 Base Course				
7.2 Wearing Course				
8. Curbing Installation				
9. Sidewalk Construction				
10. Placement of Loam and Seed				
11. Placement of Road Bounds				
12. Final Inspection				

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